REMARKS

I. Introduction

These remarks are set forth in response to the Non-Final Office Action dated June 25, 2007 (the "Non-Final Office Action"). This amendment has been filed in conjunction with the filing of a Request for Continued Examination (RCE) and a Petition to Revive for the Unintentional Abandonment of an Application along with requisite fees under 37 C.F.R. 1.17(e) and 37 C.F.R. 1.17(m). At the time of the Non-Final Office Action, Claims 6, 7, 14, 35 through 57, 60, 61 and 62 are pending and rejected in this application. Claims 6, 14, 35, 41 and 52 are independent in nature. Examiner has rejected claims 14 and 60 through 62 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,231,670 to Goldhor et al. (Goldhor) in view of U.S. Patent No. 4,829,576 to Porter. Further, Examiner has rejected claims 6 through 7 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Goldhor in view of U.S. Patent No. 4,821,211 to Torres. Yet further, Examiner has rejected claims 35 through 40 and 52 through 57 under 35 U.S.C. § 103(a) as being unpatentable over Torres. Finally, Examiner has rejected claims 41 through 51 under 35 U.S.C. § 103(a) as being unpatentable over Torres in view of Porter. In response, Applicant respectfully traverses the rejections on the art.

II. Applicant's Invention

In Applicant's invention, voice utterances are substituted for the manipulation of a pointing device of the kind which is manipulated to control motion of a cursor on a computer display and to indicate desired actions associated with the position of the cursor on the display. As such, voiced utterances are converted to commands, expressed in a predefined command language, to be used by an operating system of a computer, by converting some voiced

utterances into commands corresponding to actions to be taken by the operating system, and converting other voiced utterances into commands which carry associated text strings to be used as part of text being processed in an application program running under the operating system. To this end, a table is generated for aiding the conversion of voiced utterances to commands for use in controlling an operating system of a computer to achieve desired actions in an application program running under the operating system.

III. The Rejections on the Art

A. Characterization of Cited Art

i. Goldhor

Goldhor discloses a system and method for generating text from a voice input that divides the processing of each speech event into a dictation event and a text event. Specifically, in Goldhor, each dictation event handles the processing of data relating to the input into the system, and each text event deals with the generation of text from the inputted voice signals. In order to easily distinguish the dictation events from each other and text events from each other, a data structure is created for storing certain information relating to each individual event. Such data structures enable the processing of both simple spoken words as well as spoken commands and to provide the necessary text generation in response to the spoken words or to execute an appropriate function in response to a command. In consequence, the speech recognition of Goldhor can distinguish between dictation text and commands.

ii. Torres

Torres discloses a menu hierarchy of one or more computer programs on one or more computer systems. The hierarchy is visually displayed in a graphical tree structure to facilitate the navigation by a user from one menu in a hierarchical structure of menus to another. Navigation from one menu to another is accomplished by selecting a menu in the graphical menu tree using a pointing device. The navigation may be from one menu to another in the hierarchy of one application program in a computer system or from one menu in the program to a specific menu in the hierarchy of another application program in the computer system or in another computer system. The benefits of the technique as taught by Torres include the expanded function for intra-window and inter-window navigation, the enhanced learning of the computer system by visual presentation of capabilities and structure, and the reduced learning requirements for the user to achieve navigation.

iii. Porter

Porter relates to a text locating system configured to recognize spoken utterances and to use the recognized words as a search string in order to search text for words matching the search string. Specifically, in Porter, the probability that a given vocabulary word is selected as a search word is altered both by limiting the recognizable vocabulary to words in the text to the searched, and by altering the probability that individual recognizable words will be selected as a function of the number of time they occur in that text. As such, the system performs incremental searches by adding successively recognized words to the search string and searching for the next occurrence of the string in response to each such addition. Notably, the Porter invention can be applied to a text editing system which enables a user to switch between a dictation mode, which

inserts recognized words into text, and a search mode, which uses them to search for new cursor locations.

B. Rejections on the Art

i. Rejection of claims 14 and 60 through 62

Examiner has rejected claims 14 and 60 through 62 under 35 U.S.C. § 103(a) as being unpatentable over Goldhor in view of Porter. This rejection is respectfully traversed. Under M.P.E.P. 2142, the examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness.[1] If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness.[2] In any event, a prima facie case of obviousness under 35 U.S.C. § 103(a) requires the Examiner to articulate a finding that the prior art includes each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference. Further, the Examiner must articulate a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination, each element merely performs the same function as it does separately.[3] Importantly, all words in a claim must be considered in judging the patentability of that claim against the prior art.[4]

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[1] See M.P.E.P. 2142
[2] Id.
[3] See M.P.E.P. 2143(A). Also, note under M.P.E.P. 2143(A) that the Examiner yet further must articulate a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable. Finally, to the extent applicable, the Examiner must articulate whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.
[4] See In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Recognizing the burden placed upon the Examiner at the outset, Applicant believes that Examiner has failed to establish a prime facie case of obviousness in respect to claims 14 and 60 through 62 because Examiner has not articulated a finding that the prior art includes each element claimed and that Examiner has not considered all words in claim 14 in judging the patentability of claim 14 (and claims 60 through 62 by extension) against the prior art. Specifically, claim 14 is reproduced herein in its entirety for the convenience of the Examiner.

> 14. A voice user interface device comprising
> a converter for converting a voiced utterance belonging to a set of voiced utterances into a corresponding signal as an input to a computer or into a command to a program, the internal command comprising a member of a set of internal commands, the set of internal commands being determined by the converter during operation of the converter, the converter being capable of recognizing the voiced utterance as either one to be converted to said signal or as one to be converted to said command.

Integral to claim 14 is the recognition of a voiced utterance as either a voiced utterance to be converted to a corresponding signal, or as a voiced utterance to be converted to a command to a program. This specific limitation cannot be found in the combination of Goldhor and Porter.

In this regard, on Page 2 of the Non-Final Office Action, Examiner refers to Goldhor, Figure 1, column 1, lines 17-20 and 55-68, column 2, lines 1-2, column 4, lines 10-13, column 5, lines 40-55 and column 6, lines 46-48 in support of the contrary proposition. As Applicant is not clear exactly how Examiner has applied the cited portions of Goldhor to claim 14, Applicant reproduces all cited portions herein for the convenience of discussion.[5]

Column 1, Lines 17-20	A speech signal processor transforms the detected speech signals into a representation for recognition by a processor (e.g. short term spectral cross-sections).
Column 1, Lines 55-68	In addition to including the capability of accepting voice input and deriving the corresponding text to that voice

[5] Of note, Examiner fails to meet Examiner's obligations under 37 C.F.R. 1.104(c)(2) which requires Examiner in rejecting claims for obviousness to both cite the best references at his or her command and also, when a reference is complex or shows or describes inventions other than that claimed by the applicant, to designate the particular part relied on as nearly as practicable. In this case, the Examiner cites to a Figure and to 5 separate columns to reject the bulk of claim 14 without indicating which portions of the cited reference apply to which limitations of claim 14.

	input, it is also desirable to be able to control the system through the use of voice commands. In such a system, the voice commands actuate assigned tasks in response to the voice commands. This is especially important for a system designed for use by handicapped individuals or for a system designed for use by an individual who does not have free use of his/her hands because the hands are occupied with another task during use of the system. Moreover, when a text generating system is used for dictation, the person dictating usually can not efficiently use a keyboard, and voice operated commands would greatly facilitate use of the system.
Column 2, Lines 1-2	Known systems treat verbal input as typed input, or in other words, convert the speech into keystrokes.
Column 4, lines 10-13	As will be described below, the translation may also be any other legal input into a particular application, and the translation may in fact be used to control the application by voice.
Column 5, lines 40-55	As described above, a candidate set is associated with each dictation event. From this set, the system chooses a best match candidate. Several operations can be performed on a dictation event record that relates to the candidate set of the dictation event. In particular, a recognition candidate in the set can be marked as incorrect; a candidate can be marked as selected (i.e., can be specified by the user as a correct recognition for the speech event which the dictation event represents); candidates in the set can be reordered so that for any speech event a different candidate than the candidate originally determined by the system is produced as a best match candidate each time the speech event occurs. Finally, the entire candidate set can be retrieved for display to enable a user of the system to select the correct candidate or for further processing.
Column 6, lines 46-48	Other input events include typed input, input from pointing devices such as a mouse, etc.

The recitation of disclosure from column 1 and column 2 appears to teach speech recognition generally and the ability to use speech recognition both for speech dictation and speech commanding. The teaching of column 4 relates only to the idea that speech recognized input also can be used to command the speech recognizer itself. The teaching of column 5 relates to selecting a best matching candidate for a voice utterance. Finally, column 6 discloses only that in addition to speech input, one can interact with an application by keyboard or mouse.

For the further convenience of discussion, Figure 1 of Goldhor in its entirety has been reproduced herein:

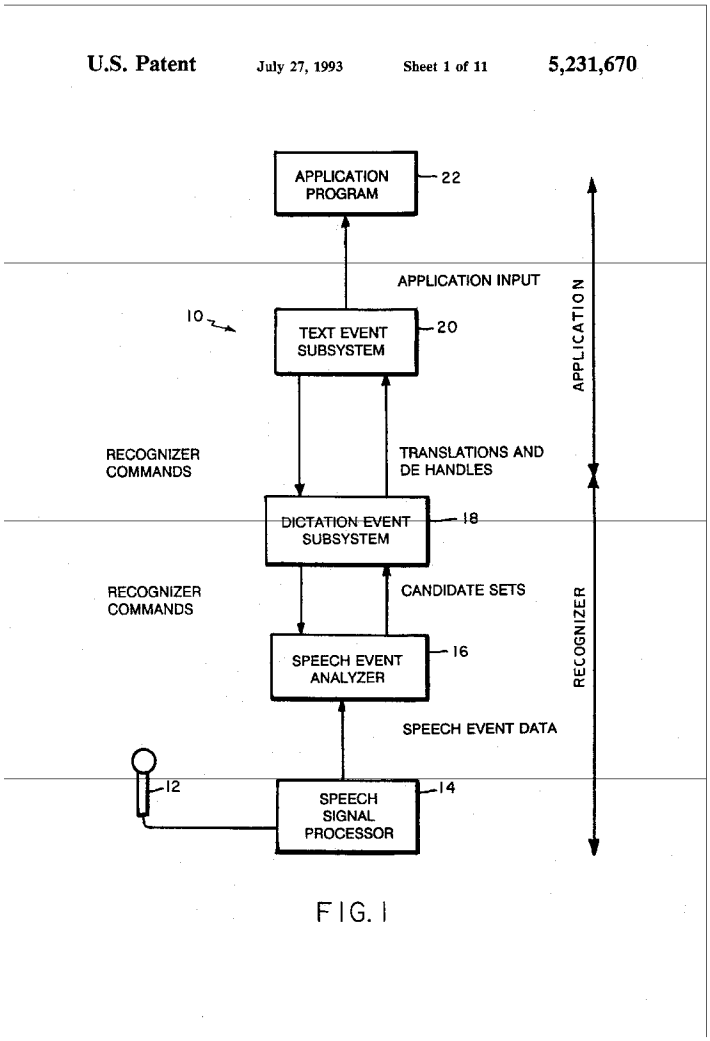

Figure 1, like the recited textual portions of Goldhor, shows only the speech recognition of text generally. Yet, comparing each of the cited portions of Goldhor and reviewing the content of Figure 1 of Goldhor, it is clear that nowhere is it taught explicitly or implicitly that a voice utterance is recognized either as an utterance to be converted to a corresponding signal OR as a voice utterance to be converted to a command to a program. Rather, in Figure 1 and its accompanying text of columns 3 and 4 of Goldhor, it is shown that a voice utterance is speech

recognized into "legal input" for an application and provided thereto. At no time, however, is a determination made whether or not the voice utterance is a command OR dictated text. So much is required by the plain language of claim 14. Thus, not all words of claim 14 have been accounted for by Examiner and Examiner has not satisfied a prime facie of obviousness under M.P.E.P. 2142.

ii. Rejection of claims 6 through 7 and 15

Examiner rejects claims 6 and 7 and 15[6] under 35 U.S.C. § 103(a) as being unpatentable over Goldhor in view of Torres. For the convenience of Examiner, claim 6 is reproduced in its entirety herein with emphasis added:

> 6. A voice user interface system for producing input to a computer, said computer having a display, said display having a pointer indicating a position on said display, and a program for execution on said computer, a state of said program comprising a configuration on said display, said configuration being associated with control of said program and having a graphical element, the system comprising
>
> a voice recognizer for recognizing a voiced utterance and for providing corresponding signals as input to said computer, and
>
> a converter for converting said voiced utterance into **a command string including a command positioning said pointer at coordinates specified relative to a graphical element of said configuration other than said pointer.**

As in the case of claim 14, Examiner has not accounted for all words in judging the patentability of claim 6 against the prior art.

Remarkably, Examiner recites nearly identical portions of Goldhor as in the case of the rejection of claim 14, for the teaching of "a command string including a command positioning said pointer at coordinates specified relative to a graphical element of said configuration other than said pointer". Reviewing the table incorporated herein above, it is painfully obvious (no

[6] Applicant observes that claim 15 had been canceled in the Amendment of January 24, 2007.

pun intended) that Goldhor neither teaches nor contemplates a "command string" that includes a command positioning a pointer "at coordinates specified relative to a graphical element of a configuration other than the pointer." Again, Examiner has failed to meet the most basic requirements of M.P.E.P. 2142 because Examiner has not accounted for whole swaths of claim language set forth expressly in claim 6.

iii. Rejection of claims 35 through 40 and 52 through 57

Examiner rejects claims 35 through 40 and 52 through 57 under 35 U.S.C. § 103(a) as being unpatentable over Torres. Claim 35 recites as follows:

> 35. A method for use with a machine having a pointing device, a graphical user interface, and an application program, the graphical user interface being controlled at least in part by a control signal that can be invoked in response to the pointing device, the graphical user interface enabling a user to launch the application program, the method comprising:
> receiving a voiced utterance from a user; and
> launching the application program in response to the received voiced utterance **without invoking the control signal**.

Examiner recites without specific application to Figure 1, Figure 2, Figure 3 and Figure 4D, and also column 3, line 64 all the way through column 5, line 56. That Examiner completely ignores the requirement of 37 C.F.R. 1.104(c)(2) set forth above that Examiner designate the particular part of Torres relied on as nearly as practicable, is not acceptable and has proven to be quite frustrating to Applicant.

Nevertheless, Examiner's error is of no consequence as it applies to claim 35 because Examiner concedes on page 5 of the Non-Final Office Action that Torres does not specifically disclose "launching the application program in response to the received voiced utterance without invoking the control signal". Disappointingly, however, Examiner provides no additional reference meeting this important claim limitation. Rather, Examiner states that "the teachings of

Torres specifically disclose using voice interaction to control system functionality (col. 4, lines 16-17)". Of course, this teaching lacks the explicitly recited limitation of "launching the application program in response to the received voiced utterance without invoking the control signal" and Examiner merely states that to add this limitation would be obvious to one of ordinary skill at the time of the invention "to provide computer access to application programs for physically challenged individuals." That the Examiner has provided a motivation to arrive at Applicant's claimed invention does not excuse Examiner from the burden of finding each and every limitation of the rejected claim in a prior art reference. **The Examiner admittedly has failed to do so in this case** and thus, Examiner has not met Examiner's burden under M.P.E.P. 2142.

iv. Rejection of claims 41 through 51

The Examiner rejects claims 41 through 41 under 35 U.S.C. § 103(a) as being unpatentable over Torres in view of Porter. Claim 41 recites as follows:

> 41. A method for use with a machine having a pointing device, and a graphical user interface that includes a cursor and at least one other graphical item, the method comprising:
> receiving a voiced utterance from a user; and
> manipulating the one other graphical item, **separately from the cursor**, in response to receiving the voiced utterance.

Importantly, Torres neither relates to nor teaches voice processing. An amateur keyword search of Torres will reveal a single reference to the term "voice" and no reference to the word "speech". The reference to the term "voice" states, "The control is provided by either keyboard, mouse, touch screen, or voice interaction techniques" which is to be translated to the possibility of controlling a menu by voice. Again, Examiner wholly ignores important claim limitations recited in claim 41--namely the manipulation of a graphical item other than a cursor in response

to receiving a voiced utterance, and as before, the Examiner refers to a multiple contiguous pages of Torres in support of such rejection in contravention of the legal requirements placed upon the Examiner under 37 C.F.R. 1.104(c)(2). Yet, as before, Examiner failures are mooted by Examiner's admission on Page 8 of the Non-Final Office Action that "Torres does not teach manipulating a graphical item separately from the cursor."

Still, Examiner refers to Porter to cure this deficiency. Specifically, Examiner refers to columns 7 and 8 of Porter, in addition to column 18 through column 22 and Figure 36 through 37 and 40 through 41 of Porter. Yet, Examiner refers to these nearly 10 pages of Porter without specific application (again in contravention of 37 C.F.R. 1.104(c)(2)) only to support the notion that "The recognition system is used with command words for finding files, searching for text strings, manipulating menus so as to display a particular menu of choices (search or find file) and for the selection of the desired displayed command." Unbelievably, Examiner does not attempt to claim that Porter provides a teaching directed to "manipulating a graphical item separately from the cursor" though Examiner already concedes that Torres lacks this teaching. Consequently, Examiner admits that the combination of Torres and Porter do not satisfy a prime facie case of obviousness under M.P.E.P. 2142.

IV. Conclusion

For these reasons, the Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. § 103. This entire application is now believed to be in condition for allowance and such action is respectfully requested. The Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner

believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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